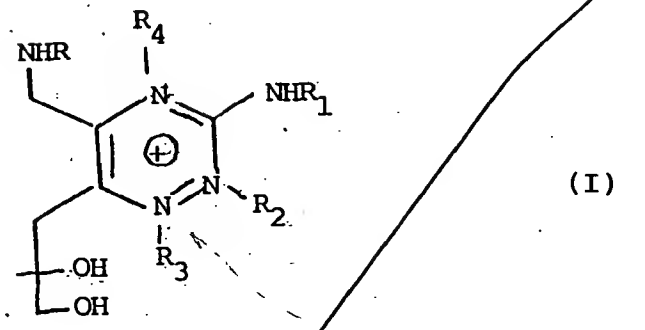
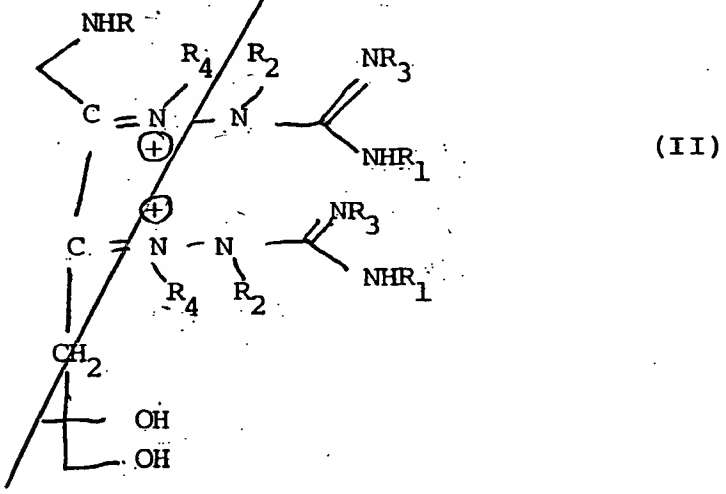
WHAT IS CLAIMED IS:

1. A compound selected from the group consisting of compounds of the formula



(I)

and



(II)

wherein R is a lower alkyl group of 1 to 6 carbon atoms;

R_1 is hydrogen or a lower alkyl group of 1-6 carbon atoms, amino, or hydroxy, or together with R_2 represent a lower alkylene bridge of 2-4 carbon atoms;

R_2 is hydrogen, or a lower alkyl group of 1-6 carbon atoms, a hydroxyethyl group or R_2 may be taken together with R_1 as noted above;

R_3 is hydrogen, a lower alkyl group of 1-6 carbon atoms or may be together with R_1 a lower alkylene bridge of 2-4 carbon atoms;

and R_4 is hydrogen, a lower alkyl group of 1-6 carbon atoms or together with R_3 is a lower alkylene bridge of 2-4 carbon atoms; and their pharmaceutically acceptable salts.

2. A compound according to Claim 1 wherein R is lower alkyl and R_1, R_2, R_3 and R_4 are each hydrogen, and their pharmaceutically acceptable salts.

3. The compound according to Claim 1 which is 3-amino-5-propylaminomethyl-6-(2',3'-dihydroxypropyl)-1,2,4-triazine or a pharmaceutically acceptable salt thereof.

4. The compound according to Claim 1 which is 1-propylamino-2,3-diaminoguanidine-1,4-dideoxyglucosone dihydrazone or a pharmaceutically acceptable salt thereof.

5. A test kit for the detection of the glycosylation products of polypeptides, comprising:

a. a predetermined amount of a labeled compound of formula I or II or the binding partner specific thereto;

b. other reagents; and

c. directions for use of said kit.

6. A test kit to be used for the detection and/or determination of one of the components selected from the group consisting of glycosylation products of polypeptides, and the specific binding partners thereto, according to a predetermined protocol, comprising:

a. a labeled component which has been obtained by coupling a compound of formula I or II to a detectable label;

b. one or more additional immunochemical reagents of which at least one reagent is a ligand or an immobilized ligand, which ligand is selected from the group consisting of:

i. a ligand capable of binding with the labeled component (a);

(ii) a ligand capable of binding with a binding partner of the labeled component (a);

(iii) a ligand capable of binding with at least one of the component(s) to be determined; and

(iv) a ligand capable of binding with at least one of the binding partners of at least one of the component(s) to be determined; and

c. directions for the performance of a protocol for the detection and/or determination of one or more components of an immunochemical reaction between the advanced glycosylation end product and a specific binding partner thereto.

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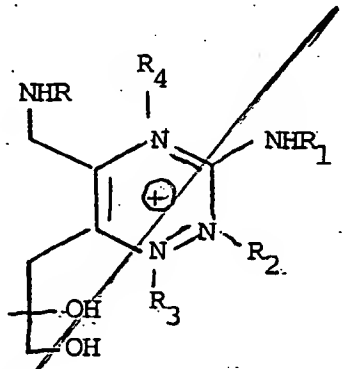
7. An indicator composition for use in an assay procedure for the detection of advanced glycosylation endproducts in polypeptide samples, said composition comprising a compound selected from the group consisting of compounds of the formula



TO320X

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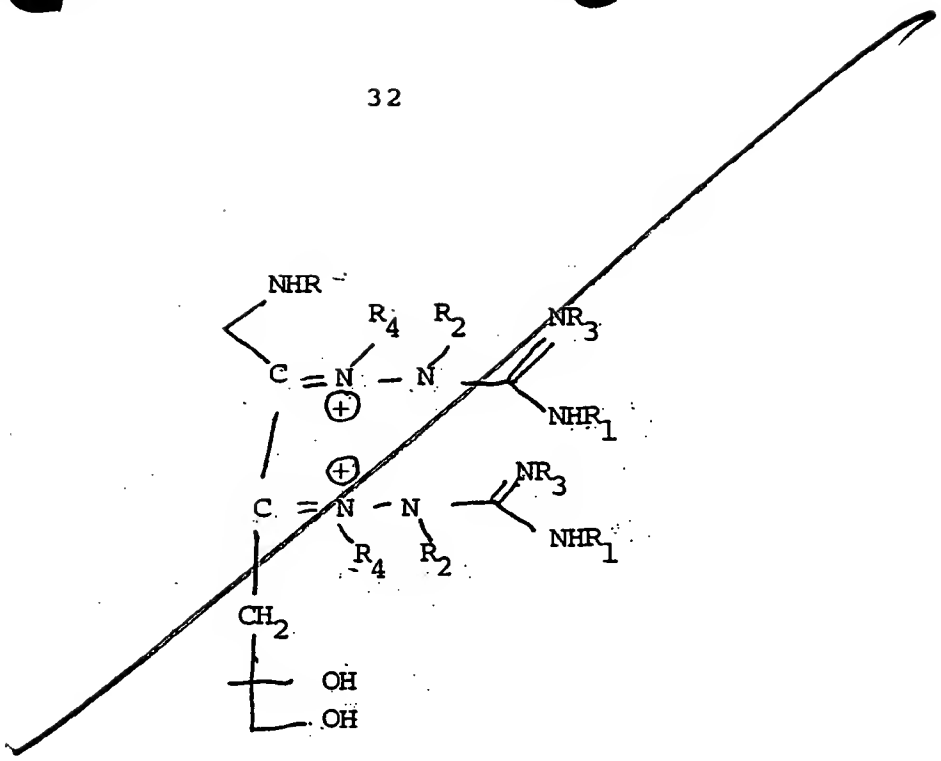
and



wherein R is a lower alkyl group of 1 to 6 carbon atoms;

R_1 is hydrogen or a lower alkyl group of 1-6 carbon atoms, amino, or hydroxy, or together with R_2 represent a lower alkylene bridge of 2-4 carbon atoms;

R_2 is hydrogen, or a lower alkyl group of 1-6 carbon atoms, a hydroxyethyl group or R_2 may be taken together with R_1 as noted above;

R_3 is hydrogen, a lower alkyl group of 1-6 carbon atoms or may be together with R_1 a lower alkylene bridge of 2-4 carbon atoms;

and R_4 is hydrogen, a lower alkyl group of 1-6 carbon atoms or together with R_3 is a lower alkylene bridge of 2-4 carbon atoms; and their pharmaceutically acceptable salts.

8. An indicator composition according to Claim 4 for use in an assay procedure for the detection of advanced glycosylation endproducts in polypeptide samples, said composition comprising a compound which is a 3-amino-5-

alkylaminomethyl-6-alkyl-1,2,4-triazine of the formula (I/a)
~~6-or a dihydrazone of 1,4-dideoxyglucose of the formula II~~.

9. The indicator of Claim 7 having associated therewith a detectable label.

10. The indicator of Claim 9 wherein the label is an enzyme.

11. The indicator of Claim 10 wherein the label is selected from peroxidase, ß-glucuronidase, ß-D-glucosidase, ß-D-galactosidase, urease, glucose oxidase plus peroxidase, galactose oxidase plus peroxidase, and acid phosphatase.

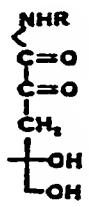
12. The indicator of Claim 9 wherein said label is a radioactive element.

13. The indicator of Claim 12 wherein said radioactive element is selected from the group consisting of ^{14}C, ^{125}I, ^{131}I, ^{35}S and ^{3}H.

14. The indicator of claim 9 wherein said label is a chemical which fluoresces when exposed to ultraviolet light.

15. The indicator of Claim 14 wherein said chemical is selected from fluorescein, rhodamine, and auramine.

16. A method for the preparation of compounds of formulae I and II comprising non-enzymatically reacting, under physiological conditions, a 1-alkylamino-1,4-dideoxyosone of the formula



(III)

20. A method for measuring the amount of advanced glycosylation endproducts in a protein sample comprising measuring the presence and amount of a compound of Claim 1.

21. A method of crosslinking proteins by reacting said proteins with a compound of Claim 1.

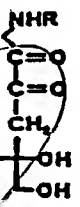
22. A method of quantitating proteins in a biological sample by measuring the reactivity of the proteins with a known amount of a compound of Claim 1.

23. A method of increasing the immunogenicity of an antigen which comprises crosslinking said antigen with a compound of Claim 1.

24. A composition for promoting the sequestration and removal from the body of an animal of target macromolecules that have undergone advanced glycosylation comprising a compound of Claim 1 capable of causing the body to increase its activity of recognizing and removing said macromolecules.

25. The composition of Claim 24 wherein said compound is bound to a carrier.

26. A method for the preparation of advanced glycosylation endproducts which comprises the nonenzymatic reaction of a compound of the formula

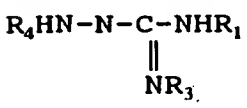


(III)

wherein R is a lower alkyl group, under physiological conditions.

wherein R is a lower alkyl group;

with aminoguanidine or an analog of the formula



(IVb)

wherein R_1 is hydrogen or a lower alkyl group of 1-6 carbon atoms, amino, or hydroxy, or together with R_2 represent a lower alkylene bridge of 2-4 carbon atoms;

R_2 is hydrogen, or a lower alkyl group of 1-6 carbon atoms, a hydroxyethyl group or R_2 may be taken together with R_1 as noted above;

R_3 is hydrogen, a lower alkyl group of 1-6 carbon atoms or may be together with R_1 a lower alkylene bridge of 2-4 carbon atoms; and

R_4 is hydrogen, a lower alkyl group of 1-6 carbon atoms or together with R_3 is a lower alkylene bridge of 2-4 carbon atoms;

and their pharmaceutically acceptable salts.

17. A method for measuring the amount of aminoguanidine or its analogs in a protein sample comprising measuring the presence and amount of a compound of Claim 1.

18. A method of detecting an aminoguanidine allergy in humans comprising testing the serum of the patient to determine the presence of antibodies to a compound of Claim 1.

19. A method for removing advanced glycosylation endproducts from the body by administering the anti-antibody or second binding partner to a compound of Claim 1 to form an immune complex activating the animal's cellular clearance system (macrophages) to remove said immune complex and associated AGEs (advanced glycosylation endproducts).